

Appln. No.: 09/774,347
Amendment Dated June 8, 2004
Reply to Office Action of May 3, 2004

YAO-4337US

Remarks/Arguments:

By this Amendment, Applicants have amended claims 1 and 37. Claims 1 and 29-43 are pending.

Interview with the Examiner

Applicants acknowledge with appreciation the courtesies extended by Examiner Letscher to Applicants' representative during the Interview held at the Patent Office on June 2, 2004. The focus of the interview was the difference between the head support mechanism defined by independent claims 1 and 37 and that disclosed in the cited references, i.e., PCT Application No. PCT/US97/07233 (the "PCT Reference") and the Crane Patent. Applicants proposed amendments to claims 1 and 37 more clearly define at least one feature of Applicants claimed invention not taught or suggested in the cited references. The amendment proposed to the Examiner is the same amendment found herein with respect to claims 1 and 37.

Examiner Letscher indicated in the course of discussions that the proposed amendments to claims 1 and 37 appear to overcome the cited references, but explained that a further analysis of the art would be necessary.

Applicants representatives also discussed the four pending applications which are related to the above identified application. Once the subject application has been allowed, it is Applicants intention to amend the claims in the four related applications so that they too incorporate the novel feature of claims 1 and 37 to expedite allowance of those four related applications.

Claim Rejections Under Section 102 and 103

Claims 1, 29-34, and 37-41 stand rejected under 35 U.S.C. § 102(b) as being anticipated by the PCT Reference; claims 35 and 42 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the PCT Reference; and claims 36 and 43 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the PCT Reference in view of Crane. Based on this Amendment, Applicants respectfully traverse the § 102(b) and § 103(a) rejections.

Claim 1 is an independent claim with claims 29-36 dependent thereon, and claim 37 is an independent claim with claims 38-43 dependent thereon.

Turning first to independent claim 1, it is directed to a head support mechanism including the following features:

- a slider having a head attached thereto for recording data to and/or reproducing data from a disk,

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- a slider holding plate for holding the slider,
- a pair of substrates each having a piezoelectric element attached thereto,
- elastic hinges for connecting the slider holding plate and a pair of substrate, and
- **a dimple for supporting the slider holding plate such that the slider holding plate is rotated on the dimple in a pitch direction, a roll direction, and a yaw direction,**
- **wherein the slider is rotated on the dimple in the yaw direction by contraction and/or expansion of at least one of the piezoelectric elements.**

Applicants contend that the head support mechanism defined by claim 1 is patentably distinguished from the PCT Reference and the Crane Patent at least based on the requirement that the slider holding plate is rotated on the dimple in the yaw direction and that the slider is rotated on the dimple in the yaw direction by contraction and/or expansion of at least one of the piezoelectric elements. Simply put, none of the references of record either teach or suggest a structure where the slider holding plate and the slider are rotated on the dimple in the yaw direction. In both the PCT Reference and the Crane Patent, the slider when operated in the yaw direction is not rotated on the dimple as required by Applicants' claim 1, as well as dependent claims 29-36.

As the Examiner pointed out in the Office Action, the piezoelectric microactuator head and flexure assembly of the PCT Reference includes a gimbal point 48 on the flexure 22. When the piezoelectric actuator 46 is operated in the yaw direction as shown by arrow 51, it is the result of the bending called the piezoelectric layers 46A and 46C. By the bending of the piezoelectric microactuator 46 in the yaw direction, the flexure 22 is moved in the yaw direction, but there is no rotation of the slider 24 on the gimbal point 48 when the microelectric actuator 46 displaces the flexure 22 in the yaw direction. Thus, the PCT Reference does not teach or suggest the novel feature of Applicants' claimed invention of the slider rotating on the dimple in the yaw direction. This deficiency of the PCT Reference is not rectified by the Crane Patent.

The Crane Patent concerns a balanced microactuator suspension designated by the reference 30. The microactuator suspension 30 has a slider 24 with a gimbal point 54 on a central cross support 50. By operation of microactuator 44 the slider is displaced in the yaw direction, but at the same time the gimbal point 54 is likewise displaced along with the slider such that there is no rotation of the slider on the gimbal point 54 when the slider is displaced in the yaw direction. In support of their position, Applicants point to the disclosure of the Crane Patent at column 4, lines 30-38, and column 6, lines 62-65.

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Thus, neither the PCT Reference nor the Crane Patent meets the requirement of Applicants' claim 1 and the claims dependent thereon of the slider being rotated on the dimple in the yaw direction. On this basis, Applicants request that the rejections of independent claim 1 and dependent claims 29-36 be withdrawn.

Independent claim 37 is also directed to a head support mechanism and includes the same feature found in claim 1 requiring that the slider rotate on the dimple in the yaw direction. On this basis, Applicants respectfully submit that independent claim 37 and dependent claims 38-43 are likewise patentably distinguished from the PCT Reference and the Crane Patent, and request that the rejection of these claims be withdrawn.

In view of the foregoing remarks and amendments, Applicants respectfully submit that claims 1 and 29-43 are in condition for allowance. Reconsideration and allowance of all pending claims are respectfully requested.

Respectfully submitted,



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Dated: June 8, 2004

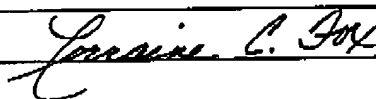
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June 8, 2004

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